

National Transportation Safety Board

Office of <Select Modal Office>

Washington, DC 20594



WPR23FA256

ELECTRONIC DEVICES

Specialist's Analysis Report

December 4, 2023

A. ACCIDENT

Location: Saint Maries, Idaho
Date: July 6, 2023
Time: 0917 Mountain Daylight Time
1500 Coordinated Universal Time
Airplane: Cessna 182N, N703Z

B. ELECTRONIC DEVICES SPECIALIST

Specialist Deven Chen
Vehicle Recorder Specialist
National Transportation Safety Board (NTSB)

C. DETAILS OF THE INVESTIGATION

The NTSB Vehicle Recorder Division received the following devices:

Recorder: Shadin Fuel Flow Indicator

Recorder: Stratus 3i Appareo

1.0 Shadin Fuel Flow Description

The Shadin Fuel Flow Indicator is a panel mounted device for displaying the amount of fuel that has been fed through the fuel system of an aircraft. It stores fuel quantity information in a non-volatile memory (NVM) device contained within the gauge.

1.1 Shadin Fuel Flow Data Recovery

The fuel flow indicator arrived in good working condition. It was provided power, and the values for remaining and used fuel were recorded (Photo 2 and 3). The Shadin fuel flow meter displays both parameters in units of pounds (lbs).



Photo 1. Fuel remaining

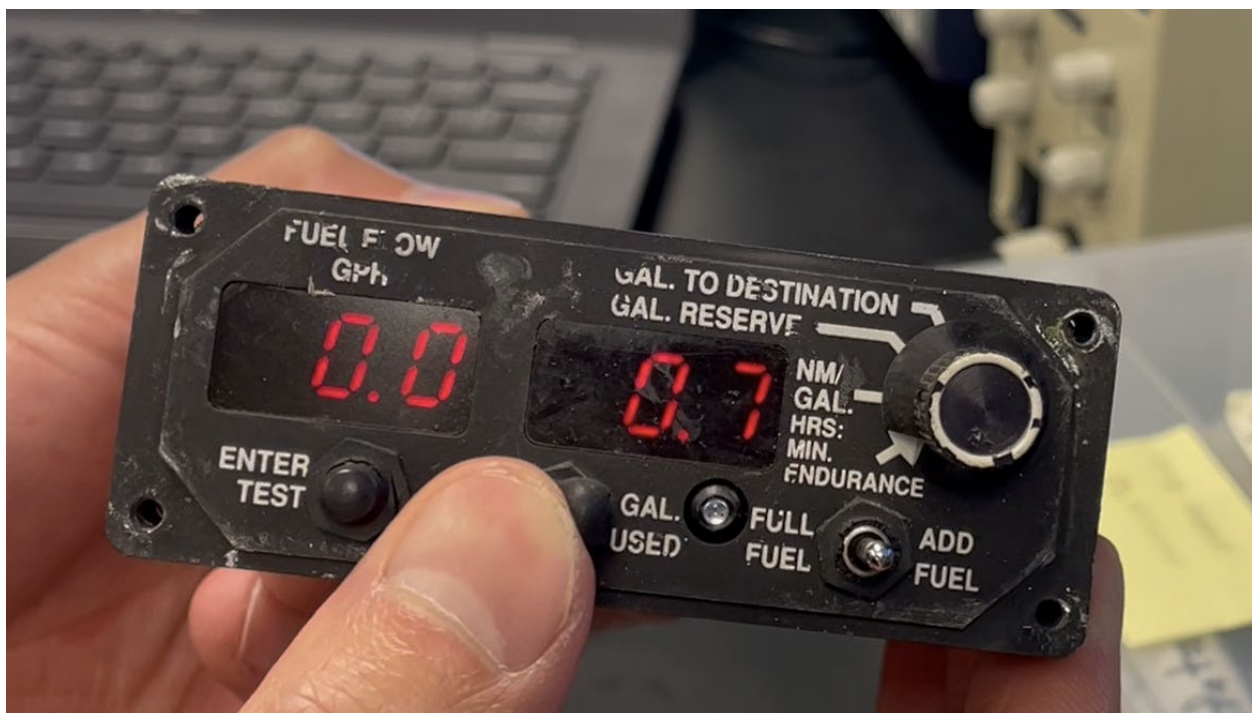


Photo 2. Fuel used

2.0 Stratus 3i Appareo Description

The Stratus 3i is a portable receiver that provides pilots with in-flight weather and traffic and is a source of accurate WAAS (Wide Area Augmentation System) GPS position. It receives ADS-B (Automatic Dependent Surveillance-Broadcast), FIS-B (weather information), TIS-B (traffic information), and other related data and broadcasts. Stratus 3i also includes AHRS (attitude heading reference system), a flight data recorder and pressure altitude sensor.

2.1 Stratus 3i Appareo Recovery

The Stratus 3i arrived in good working condition at the lab. It was provided power, and the logs were copied from the device. The final moments of the flight were used to produce the following overlays and tabular data (see Photo 3).

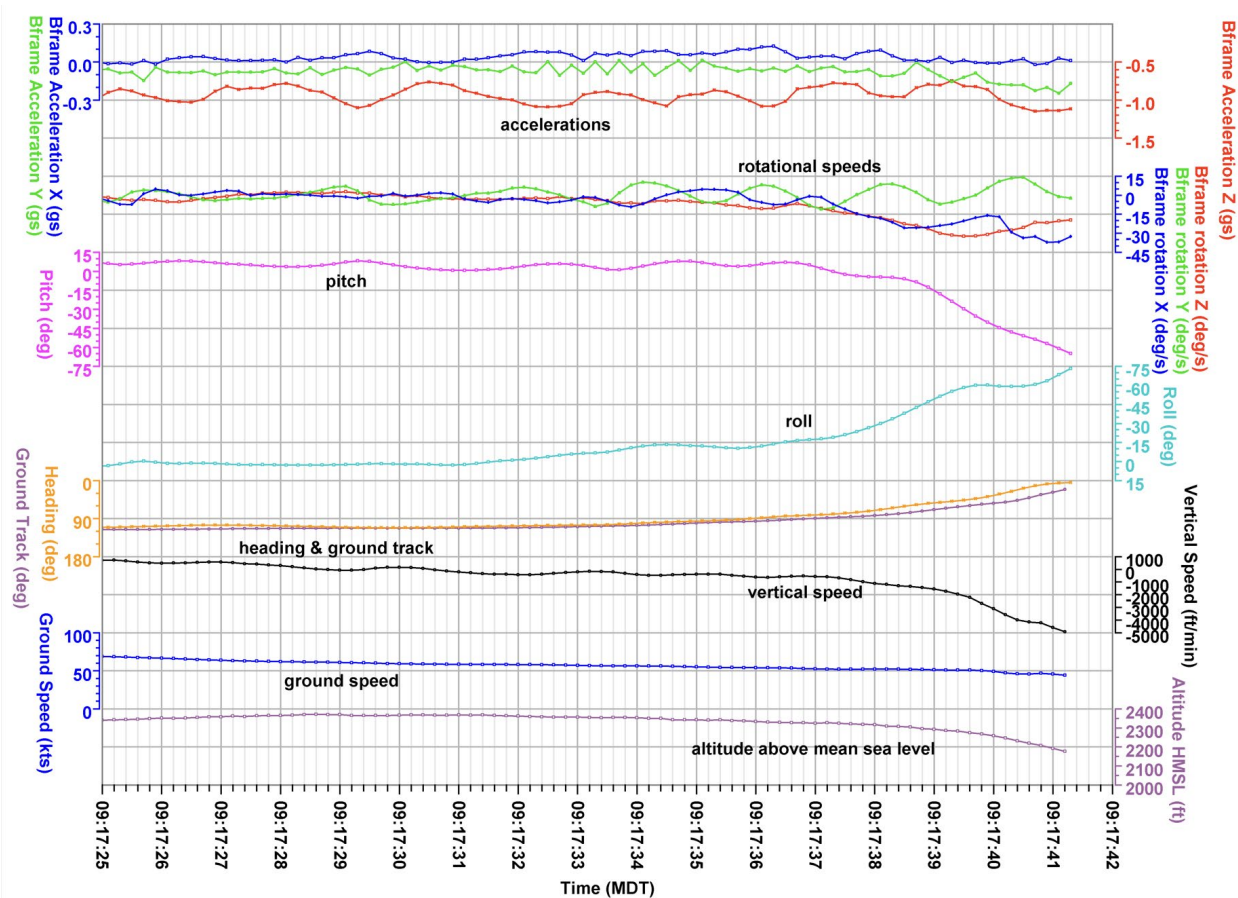


Photo 3. Overview plot of the Stratus 3i.